

AMENDED CLAIMS

1. Self-adhesive, flexible sealing tape comprising at least one flexible, self-adhesive core or at least one flexible, self-adhesive carrier layer provided with an envelope or two-sided coating consisting of a second adhesive system, characterized in that the envelope/coating consists of an expanded pressure-sensitive adhesive tape, and that the material for the core/the carrier layer is selected from the group consisting of thermoplastic rubbers on the basis of styrene-isoprene-styrene block copolymers or styrene-butadiene-styrene block copolymers, copolymers of vinyl acetate, polyisobutylenes and acrylates which have been cross-linked either thermally or by means of UV irradiation.
2. Sealing tape according to claim 1, characterised in that the material for the core/the carrier layer has a glass transition temperature (T_g) of below 0 °C.
3. Sealing tape according to claim 1 or 2, characterised in that the pressure-sensitive adhesive tape is based on a pure dispersion acrylate.
4. Sealing tape according to claim 3, characterised in that the pure dispersion acrylate is based on plasticizing monomers selected from the group consisting of 2-ethylhexyl acrylate, 1-butyl acrylate and n-butyl acrylate.
5. Sealing tape according to claim 1, characterised in that the pressure-sensitive adhesive tape consists of an adhesive based on vinyl isobutyl ether or isobutene.

6. Sealing tape according to any one of the preceding claims, characterised in that the thickness of the core/the carrier layer is between 0.1 mm and 8 mm, especially preferably between 1 mm and 5 mm.
7. Sealing tape according to any one of the preceding claims, characterised in that the width of the core/the carrier layer is between 1 mm and 10 mm.
8. Sealing tape according to any one of the preceding claims, characterised in that the thickness of the envelope/coating is between 0.2 and 1.5 mm, especially preferably between 0.5 mm and 1 mm.
9. Sealing tape according to any one of the preceding claims, characterised in that the envelope/coating has a foam-like structure.
10. Sealing tape according to any one of the preceding claims, characterised in that the sealing tape is equipped with reinforcing elements which stabilise the sealing tape, particularly in the longitudinal direction.
11. Sealing tape according to any one of the preceding claims, characterised in that the reinforcing element is selected from the group consisting of threads, nonwovens or interlaid scrims, wovens, and knitted or crocheted fabrics.
12. Process for the manufacture of a self-adhesive, flexible sealing tape comprising at least one flexible, self-adhesive core or at least one flexible, self-adhesive carrier layer provided with an envelope or two-sided coating consisting of a second adhesive system, characterised in that the core/carrier layer and the envelope/coatings are manufactured in independent processes as web-like materi-

als, and that subsequently two pre-fabricated pressure-sensitive adhesive tapes, one per side, are advanced towards a web consisting of the elastic core material/carrier layer material, and are combined therewith by application of pressure.

13. Process according to claim 12, characterised in that for the manufacture of the expanded pressure-sensitive adhesive tape an aqueous dispersion of the pressure-sensitive adhesive is produced which contains a filler consisting of small, thermoplastic hollow spheres of plastic which are filled with hydrocarbon gas, said hollow spheres expanding upon exposure to a temperature in the range between 70 °C and 140 °C, and that the dispersion is processed to a pressure-sensitive adhesive tape, which will then be expanded.

14. Use of a sealing tape according to any one of claims 1 to 11, for adhesively bonding vapour barrier films or vapour retarder films, especially for adhesively bonding said films to walls.